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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,758	06/21/2006	Nicholas James Adams	TS5595US	4917
23632 7590 04/01/2009 SHELL OIL COMPANY P O BOX 2463 HOUSTON, TX 772522463				
EXAMINER MCCAIG, BRIAN A				
ART UNIT		PAPER NUMBER		
1797				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/583,758

Applicant(s)

ADAMS ET AL.

Examiner

BRIAN MCCAIG

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 18 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-15 and 17-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Summary

1. This Office action is based on the 10/583758 application filed June 21, 2006, and amended December 18, 2008.
2. Amendment of claims 1 and 12 and cancellation of claims 5 and 16 are noted.

Response to Amendment

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-4, 6-15, and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over BENARD ET AL (WO 02/099014 A2) in view of MILLER (US 6699385 B2) and BRADFORD (WO 05/044954 A1).**
5. With respect to claims 1-4 and 12, BENARD discloses [see abstract; pg 4, lines 18-22; and pg 12, lines 4-9 & lines 33-35] a process to prepare a base oil starting from a slack wax, which contains other wax sources such as a Fischer-Tropsch derived wax, feedstock by contacting the feedstock in the presence of hydrogen with a catalyst under hydroisomerization conditions and performing a subsequent pour-point reducing step (solvent-dewaxing) to obtain the base oil, which is analogous to reducing the wax content of a Fischer-Tropsch wax followed by solvent dewaxing as required in claim 1(c) of the instant application.
6. BENARD does not appear to explicitly disclose wax content of the intermediate product.
7. However, MILLER discloses [see, e.g., the abstract & column 4, lines 25-35] a process for producing a base oil by providing a heavy waxy feed stream having an initial boiling point greater than 900° F (480° C) and more preferably 950° F (510° C) and a paraffin (wax) content of at least 80%, which satisfies the limitations of claims 2 and

3 of the instant application. The initial boiling point implies that a 0 wt % recovery boiling point at temperatures less than possibly 510° C, or, conversely, that the 10 wt % recovery boiling point will be greater than possibly 510° C, as required in claim 2 of the instant application. Furthermore, since the initial boiling point of MILLER is greater than 510° C, it is obvious that the initial boiling point may be 550° C, which satisfies the requirement of claim 4 of the instant application. Furthermore, it is expected that the wax content of the product of the hydroisomerization step of MILLER is inherent to the process since the feedstock, catalyst, and reaction conditions are similar to those in the instant application [column 6, line 17 to column 7, line 50].

8. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the feed of BENARD to include the heavy wax of MILLER to obtain a plurality of fuel fractions as taught by MILLER [column 2, line 5-column 3, line 5]. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

9. BENARD does not appear to explicitly disclose transporting the feed from step (a) from a remote location to another location closer to the end user (step (b)).

10. However, BRADFORD discloses [pg 1 line 1 to pg 2, line 6 & pg 7, line 29 to pg 8, line 21] a process of transporting a hydrocarbon product from a remote location via a ship to a location closer to end users.

11. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the process of BENARD to include the transport process of BRADFORD in order to reduce the high capital expenditures of other transporting processes such as pipelines or liquefying into a natural gas, which requires liquefaction and re-gasification plants each transport terminal as taught by BRADFORD [pg 1, lines 11-14]. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

12. While neither MILLER nor BENARD appears to explicitly disclose that the viscosity of the haze free base oil has a the required kinematic viscosity as recited in the preamble of claims 1 and 12, it is expected that the requirement is inherent since both the intermediate products and the solvent dewaxing steps [page 12, line 35 to

page 13, line 23] are similar. Furthermore, neither MILLER nor BENARD explicitly require the incorporation of a viscosity modifier, the absence of which is further required in the preamble of claim 12.

13. With respect to claims 13-15, MILLER discloses [see, e.g., the abstract & column 4, lines 25-35] a process for producing a base oil by providing a heavy waxy feed stream having an initial boiling point greater than 900° F (480° C) and more preferably 950° F (510° C) and a paraffin (wax) content of at least 80%, which meets the limitations of claims 2 and 3 of the instant application. The initial boiling point implies that a 0 wt % recovery boiling point at temperatures less than possibly 510° C, or, conversely, that the 10 wt % recovery boiling point will be greater than possibly 510° C, as required in further required in claim 2 of the instant application.

14. Furthermore, since the initial boiling point of MILLER is greater than 510° C, it is obvious that the initial boiling point may be 550° C, which satisfies the requirement of claim 4 of the instant application.

15. With respect to claims 6-8 and 16-19, MILLER discloses [column 5, line 22 to column 6, line 36] a similar hydroisomerization catalyst to that taught by BENARD [see, e.g., pg 7, lines 22-26 & pg 11, lines 30-31] and disclosed in the instant application (i.e., a Group VIIIB metal such as nickel on a suitable refractory metal oxide carrier such as silica, alumina, or silica alumina). Furthermore, the reaction conditions (BENARD [pg 12, lines 4-26] and MILLER [column 7, lines 30-50]), and feeds are similar between the aforesaid references and the instant application. Since the feed and reaction conditions between the aforesaid references and the instant application are similar, it is obvious that the intermediate product would possess the same properties as required in claims 6-8 of the instant application.

16. With respect to claims 9-10 and 20-21, BENARD discloses [see, e.g., pg 4, lines 7-10; pg 5, lines 23-30; pg 7 lines 22-26; & pg 10, lines 20-24] wherein the hydroisomerization catalyst is an amorphous and/or a molecular sieve-based catalyst comprising a silica-alumina carrier and a Group VIIIB metal, particularly, nickel.

17. With respect to claims 11 and 22, BRADFORD discloses [abstract & pg 7, line 32-pg 8, pg 8, line 24] that transporting is by means of a ship wherein the hydrocarbon product is loaded onto empty product containers in the

ship that have been purged with nitrogen, wherein the nitrogen was obtained by separating oxygen from air with the oxygen being used in the Fischer-Tropsch process to create the hydrocarbon product.

Response to Arguments

18. Applicant argues that BENARD does not disclose the limitations of claim 1 as amended.
19. The applicant's argument is not persuasive because it does not address the combination of BENARD with MILLER.

Conclusion

- 20.
21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
22. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.
23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN MCCAIG whose telephone number is (571) 270-5548. The examiner can normally be reached on M-F 8-430.
24. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

25. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BAM
3/27/2009

/Glenn A. Caldarella/
Acting SPE of Art Unit 1797